

procedure, each telephone number (including unlisted numbers) within the county has an equal probability of selection. The household effort data obtained in each county is weighted by the number of households in the county for calculation of a state level estimate of the mean household fishing effort. In statistical terms, a stratified sampling estimator is used. This weighting procedure was initiated in 1993 and applied to all historical estimates. Approximately 20,000 phone calls are conducted in North Carolina annually, usually reaching more than 2,000 finfishing households.

All households are eligible for contact in each wave, regardless of whether they were contacted in a previous wave. Telephone interviews are conducted between 10:00 am and 9:30 pm (respondent's local time) on weekdays and weekends. Up to ten attempts are made to reach each household. Repeated attempts are made to complete the questionnaire with all eligible anglers residing in each contacted household. Information on marine recreational fishing activity is obtained from each angler in the household or from a responsible adult when appropriate. A procedure called "hot deck" imputation is used to adjust for non-respondent anglers and households prior to estimation.

Effort Estimates

In the MRFSS, fishing effort is defined as the estimated number of fishing trips taken by individual anglers. The number of individual fishing trips is estimated for each state, coastal county, mode, and bimonthly wave. Total effort represents residents who are coastal, non-coastal, and out-of-state. Data from the telephone survey of households are used to calculate mean numbers of trips per household in each fishing mode during each wave. This number is multiplied by the number of permanent, full-time occupied households in the coastal county to estimate total number of fishing trips in each mode by coastal county residents. Data on the number of households in the coastal zones are updated annually.

The telephone survey does not cover all angler trips encountered in the field. For example, the telephone survey cannot provide information on the number of trips taken by people who reside in households beyond the 25 to 50-mile coastal zone from which the telephone numbers are drawn. Neither can it provide information on trips taken by people who live in households without telephones. Ratios obtained from the intercept survey are used to estimate the numbers of trips taken by out-of-state residents, by state residents of non-coastal counties, and by others who are not covered by the telephone survey.